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10/051,450	01/17/2002	Daniel M. Gruen	3330/61	6982

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EXAMINER	
DATSKOVSKIY, SERGEY	

ART UNIT	PAPER NUMBER
2121	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/051,450	GRUEN ET AL.	
	Examiner	Art Unit	
	Sergey Datskovskiy	2121	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 January 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Status of the claims

Claims 1-18 were originally presented. After the previous Office Action, claim 1 was amended. Claim 19 was added. Claims 1-19 are still pending in the Instant Application.

Claim Objections

Claim 19 is objected to because of the following informalities: the phrase "the method" is misspelled as "them method" in line 3 of claim 19. Appropriate correction is required.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

1. Claims 1-9 and 19 are rejected under 35 U.S.C. §101 because the claimed invention is directed to non-statutory subject matter.

2. Claims 1 is directed towards a method for recognizing and flagging a data item. Said method represents an abstract algorithm implemented in software. Abstract ideas (see Warmerdam, 33 F.3d at 1360, 31 USPQ2d at 1759) or mere manipulation of abstract ideas (see Schrader, 22 F.3d at 292-93, 30 USPQ2d at 1457-58) are not patentable. However, for claims including such excluded subject matter to be eligible, the claims must be for a practical application of the abstract idea. Such practical application can be identified in the following ways:

a. The claimed invention "transforms" an article of physical object to a different state or thing.

b. The claimed invention otherwise produces a useful, concrete and tangible result.

The acts of *determining* a collection, *calculating* statistics, *identifying* anomalous data item, and *flagging* the data item do not produce any physical transformations. The next step is to determine whether the claimed invention produces a useful, concrete and tangible result. With *flagging the data item* as the last step of the method, claim 1 produces "flagged data" as a result. This translates into changing bits in a computer memory, which is not a tangible result. Therefore, flagging data is an operation that does not produce any real-world output that could be called a tangible result.

Similarly, claim 19 repeats the steps of claim 1 with an additional step of *determining* an action. The act of d*etermining* by itself does not produce any result, especially a tangible one.

Claims 2-9 depend upon claim 1 and carry the same problem of being directed to non-statutory subject matter as their parent claim.

3. Thus, claims 1-9 and 19 are rejected under 35 U.S.C. §101 as being directed to a manipulation of abstract ideas that does not have practical application.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Agrawal et al., U.S. Patent Number 6,094,651 (Agrawal). Specifically:

Claim 1

5. Agrawal discloses a method for recognizing and flagging data item (col.1, lin.29-37, data items are data cells stored in the multiple dimensional database) by one or more application programs (col.1, lin.21-28) as falling within the scope of rule (col.1, lin.37-45; the use of attributes implies rules are used to place the data into groups based on the particular attributes) but anomalous when compared with other data items within the scope of rule (col. 2, lin.38-43) comprising:

- Determining a collection to which the data item belongs as defined by rule (col. 4, lin.47-52., areas of data cube is the collection and the rule is the measure based on Self-Exp value)
- Calculating statistics for the other data items in the collection (col.3, lin.1-6; the expected value, such as Self-Exp value, is the statistics)
- Identifying whether the data item is an anomalous data item based on the statistics calculations (col.2, lin.38-43)
- Flagging anomalous data item as anomalous (col.4, lin.47-52; a cell with a anomalous Self-Exp value is highlighted with a color.)

Claims 2-7

6. The step of calculating statistics further comprising:

- (claim 2) calculating a mean data item size and standard deviation for the other data items in the collection (col.3, lin.16-20).
- (claim 3) calculating a mean interval between data items and standard deviation for the other data items in the collection and (claim 4) calculating a mean data item arrival time and standard deviation for the other data items in the collection (col.9, lin.63-67. Data items have time dimension that contribute to the value of cell data. The meaning of time is open for explanation that would have included interval between data and mean data arrival time. Therefore statistics calculation as indicated above claim 2 also applies with respect to time value of the data)
- (claim 5) calculating a presence or absence of keywords for the other data items in the collection and identifying whether the data item is an anomalous data item based on the presence or absence of keywords. (col. 2, lin.43-53; keywords would have been a part of a composite value of data subject to statistics calculation as illustrated in claim 1)
- (claim 6) calculating statistics for the other data items in the collection is performed in real time (col.1 , lin.21-35; On-Line in OLAP means seven days a week, 24 hours a day, sixty minutes an hour and sixty seconds a minute and OLAP data cubes are used for interactive exploration of data. Hence real time.)
- (claim 7) calculating statistics is performed periodically (col.1, lin.24-28, the users can use OLAP any time and they would have used it periodically)

Claims 8, 9

7. (claim 8) The step of identifying in claim 1 comprises determining whether the data item falls outside a number of standard deviations from statistical calculations (col.6, lin.38-42).

8. (claim 9) A user can set the number of standard deviations (col.4, lin.11-18; the user interface based on Microsoft Excel as front end for user-interaction allows user to set values of data such as standard deviation)

Claims 10-18

9. Claims 10-18 correspond to claims 1-9 respectively by implementing the method steps of claims 1-9 as a computer program stored on a computer readable media. Therefore claims 10-18 are rejected under the same rationale as cited in the rejection of rejected claims 1-9 respectively. Agrawal also teaches the implementation of the method for recognizing and flagging data item using program storage device and a machine that embody a program of instructions executed by the machine for the performing the method. (col.3, lin.21- 30)

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Agrawal et al. (US Patent No. 6,094,651) in view of Yost et al. (US Patent No. 6,567,796).

Claim 19

Agrawal discloses a method for recognizing and flagging a data item (col.1, lin.29-37, data items are data cells stored in the multiple dimensional database) used by one or more application programs (col.1, lin.21-28) as falling within the scope of a rule (col.1, lin.37-45; the use of attributes implies rules are used to place the data into groups based on the particular attributes) but anomalous when compared with other data items falling within the scope of the rule (col. 2, lin.38-43), the method comprising:

determining a collection to which the data item belongs as defined by the rule (col. 4, lin.47-52., areas of data cube is the collection and the rule is the measure based on Self-Exp value);

calculating statistics for the other data items in the collection (col.3, lin.1-6; the expected value, such as Self-Exp value, is the statistics);

identifying whether the data item is an anomalous data item based on the statistical calculations (col.2, lin.38-43);

flagging the data item as an anomalous data item if the data item is identified as an anomalous data item (col.4, lin.47-52; a cell with a anomalous Self-Exp value is highlighted with a color).

Agrawal does not expressly disclose the method comprising:

retrieving a user preference profile;

determining an action to take for the flagged data item based upon the user preference profile retrieved.

Yost discloses:

retrieving a user preference profile (col. 8, lines 19-28; personalization module);

determining an action to take for the flagged data item based upon the user preference profile retrieved (col. 8, lines 34-49; "*...subscribers may assign particular operations to be performed for each of the reports within a project.*").

Agrawal and Yost are analogous art since they are both directed to an implementation of on-line analytical processing system (OLAP). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to include OLAP with a method for locating data anomalies from Agrawal (col. 2, lines 29-33) and combine it with the personalization module from Yost (col. 8, lines 19-28). The reason for doing so would be to enable subscribers to personalize services used for automatically generating output from an online analytical processing system (Yost, col. 5, lines 12-15). Therefore, it would have been obvious to modify Agrawal in view of Yost by including a personalization module in on-line analytical processing system.

Response to Arguments

Applicant's arguments filed on January 23, 2006 have been fully considered but they are not persuasive.

Regarding Claim Rejection under 35 U.S.C. §101:

11. Claims 1-9 stay rejected under 35 U.S.C. §101 because of being directed to a manipulation of abstract ideas that does not produce a useful, concrete and tangible result. For the detailed analysis see 35 U.S.C. §101 rejection above.

12. Claims 10-18 are directed towards a computer readable media comprising a program code executable by a computer. Examiner assumes such media to belong to a statutory type of media, therefore, 35 U.S.C. §101 rejection of claims 10-18 is withdrawn. However, Examiner disagrees with Applicant's statement that even a signal or a carrier wave would be statutory under 35 U.S.C. §101. Claims that recite nothing but the physical characteristics of a form of energy, such as a signal or a carrier wave define energy or magnetism, per se, and as such are nonstatutory natural phenomena, see O'Reilly, 56 U.S. (15 How.) at 112-14.

Regarding Claim Rejection under 35 U.S.C. §102:

13. Applicant argues that Agrawal does not discuss, teach or otherwise suggest determining a collection to which a data item belongs as defined by a rule. To clarify the matter, Examiner gives a general definition of a "*rule*" used to interpret the claimed limitation. A *rule* can be defined as a *condition* followed by one or more *actions*.

Agrawal discloses areas of a cube highlighted with particular colors based on their exception value (col. 4, lines 47-52). A set of highlighted areas with a similar color represents a collection of data. Highlighting itself represents an *action* part of the rule, wherein the *condition* is the check for data area having a certain exception value. The intensity of a highlight is *conditioned* by the degree of exception. Therefore, Agrawal teaches that determining a collection to which a data item belongs as defined by a rule. Furthermore, an act of "determining" implies using a condition, *i.e.* a rule. Any kind of item classification is not possible without using a rule.

14. Claims 1-18 stay rejected under 35 U.S.C. §102(b) as being anticipated by Agrawal.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Scannell et al. (US Patent No. 5,377,354) teaches method and system for sorting and prioritizing electronic mail messages. Thurlow et al. (US Patent No. 6,057,841) teaches system and method for processing electronic messages with rules representing a combination of conditions, actions or exceptions.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sergey Datskovskiy whose telephone number is (571)

272-8188. The examiner can normally be reached on Monday-Friday from 8:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Knight, can be reached on (571) 272-3687. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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